CPAD Instrumentation Frontier Workshop 2021

Virtual Event @ Stony Brook University, March 18-22, 2021

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Stony Brook University | ICFA | Center for Frontiers in Nuclear Science

The APS DPF Coordinating Panel for Advanced Detectors CPAD

CPAD role: to promote excellence in research & development of instrumentation & detectors to support the national program of particle physics in a global context. Since inception in 2012 CPAD has been ably led by Ian Shipsey (Oxford) and Marcel Demarteau (ORNL). We are very grateful for their leadership. With the recent DOE BRN for Detectors concluding and the new Snowmass process having just starting, Ian and Marcel have handed over the reigns to us, Karsten Heeger (Yale) and Petra Merkel (FNAL).

Among the notable achievements of CPAD: coordination of the Snowmass 2013 Instrumentation Frontier & its report, creation of the DPF instrumentation awards, creation of the DOE Graduate Instrumentation Research Award, annual advice to DOE on the SBIR program, creation of an annual CPAD workshop & whitepaper "New Technologies for Discovery" & the first truly interdisciplinary workshop on "Quantum Sensing for High Energy Physics" in 2017 & report "Quantum Sensing for High Energy Physics" articulated the rationale for a QSHEP program and was cited by the House Science and Technology Committee.

Looking forward: A lot of new instrumentation ideas in the community that have the potential to transform the physics reach of the next generation of experiments. In need of revolutionary breakthroughs in technology rather than evolutionary advances.
Important to look outside the boundaries of classic HEP instrumentation and adapt technologies from other fields, such as quantum sensing as well as advanced materials, condensed matter and Artificial Intelligence.
CPAD will assist the Snowmass process with the organization of interdisciplinary workshops and through its close ties to international bodies such as ICFA and domestic agencies, including DOE and NSF.


CPAD
ABOUT CPAD
COMMITTEES
WORKSHOPS
PRIZES & AWARDS
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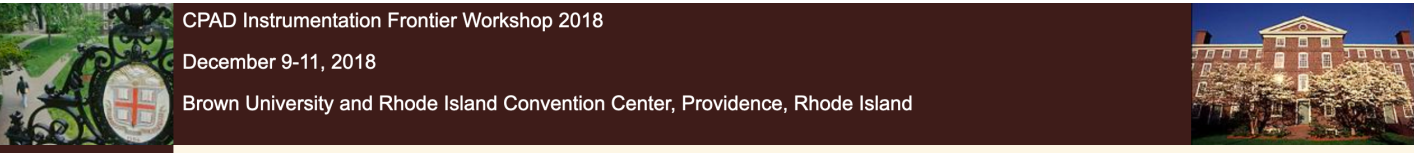
CPAD AND DPF
CPAD, the Coordinating Panel for Advanced Detectors, seeks to promote, coordinate and assist in the research and development of instrumentation and detectors for high energy physics experiments.
FIND OUT MORE
CPAD website https://cpad-dpf.org/

Previous Workshops

UNIVERSITY of WISCONSIN–MADISON : physics : cpad2019

CPAD INSTRUMENTATION FRONTIER WORKSHOP 2019
University of Wisconsin-Madison

HOME | REGISTRATION | PROGRAM | WORKING GROUPS | VENUE | HOTELS | MAP | TRAVEL INFORMATION | COMMITTEES



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New Technologies for Discovery IV: The CPAD Instrumentation Frontier Workshop 2018

Welcome to the web site of the CPAD Instrumentation Frontier Workshop 2018. Hosted by the Physics Department at Brown University, the meeting December 9-11, 2018 in Providence, Rhode Island.

CPAD INSTRUMENTATION FRONTIER 2016 AT CALTECH, 8-10 OCT. : NEW TECHNOLOGIES FOR DISCOVERY II

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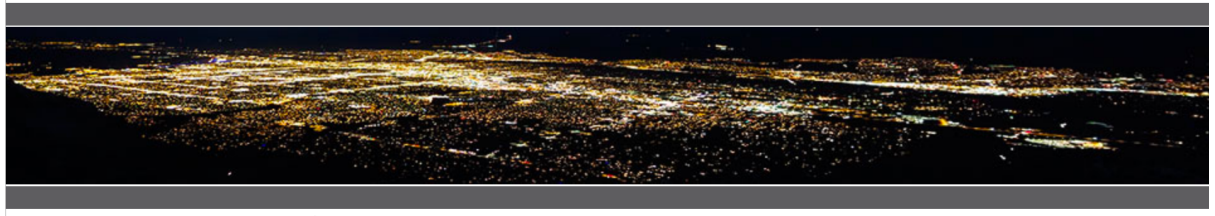
UNM | *CPAD 2017*
October 12-14 Albuquerque, New Mexico



Delegate's Meeting Info
Parking at UNM
National Advisory Committee

New Technologies for Discovery III: The 2017 CPAD Instrumentation Frontier Workshop

NEW TECHNOLOGIES FOR DISCOVERY II

Organized by the

ating Panel for Advanced Detectors

ivision of Particles and Fields

American Physical Society

CPAD Instrumentation Frontier Meeting

5-7 October 2015
University of Texas at Arlington
America/Chicago timezone

Timetable
Agenda
Conference Webpage
Registration
Call for Abstracts
Support

Organized by the Coordinating Panel for Advanced Detectors of the Division of Particles and Fields of the American Physical Society

This workshop will explore and evaluate Detector R&D opportunities, needs, and the challenges ahead for High Energy Physics in the US within the context of the P5 plan.
New ideas are particularly welcome!

Stony Brook University

- Stony Brook University, widely regarded as a flagship university of the State University System of New York SUNY
- Physics department: Founding members and leaders of
  - D0 at Tevatron/FNAL
  - PHENIX/sPHENIX at RHIC/BNL
  - ATLAS at LHC/CERN
  - Electron Ion Collider at Brookhaven National Lab BNL
- Vicinity to BNL: SBU is largest academic user, co-manages nearby Brookhaven National Laboratory and chairs the Brookhaven Science Associates BSA
- Strong interest and impact in detector R&D

http://www.stonybrook.edu/cfns

- Established in Fall 2017 with generous support from the **Simons Foundation and NY State**. A collaboration between Stony Brook & BNL to create a frontier research center to support the US Electron Ion Collider (EIC) and enhance the US Nuclear Science

- Participation from EIC and QCD enthusiasts from around the world – welcome.

Director: abhay.Deshpande@stonybrooke.edu
Administrative Contact: CFNS_contacts@stonybrook.edu

Vision:

To support and help the US EIC community to realize the US EIC with the best possible physics (including possible new ideas beyond the EIC original proposal). Invest in and support young researchers to achieve this vision.

Activities:

- A postdoctoral research fellow program : 5-7 CFNS Local Fellows at SBU and BNL, and 5-10 world-wide Joint postdoctoral fellows
- Organize & support workshops & international meetings
- Bi-monthly joint seminars (SBU/BNL)
  - 40+ seminars and special talks / year
- Workshops, meetings and seminars all broadcast worldwide
- Annual visitor's program for QCD & BSM research
- Annual international summer school; full support for 30 students

Themes for this Workshop

- BRN for Detectors: Basic Research Needs Workshop organized by DOE in 2019
  - Defines PRDs: Priority Research Directions
  - Parallel tracks organized along these lines
  - CPAD can aid in defining an R&D roadmap addressing the PRDs

- Cross fertilization with NP community
  - EIC
  - Neutrino/DM detection techniques

THURSDAY

Overview and Summary of BRN for Detectors

Parallel tracks with community contributions

Social and Networking Event: Reception on GatherTown platform (BYOB)

FRIDAY

NP/EIC Plenary

Parallel tracks with community contributions

Townhall w/ DOE & NSF

Cross Cutting Plenary

MONDAY

Award and Blue Sky Plenary

Early Career Plenary

Summary/Closing Plenary

Archiving of all contributions on zenodo

CPAD2021 zenodo archive: link

- Please upload your talks there in addition to indico
- If you like to prepare a short write-up of your contribution it can be stored there as well (not mandatory)

ZENODO for archiving your talks (besides indico):

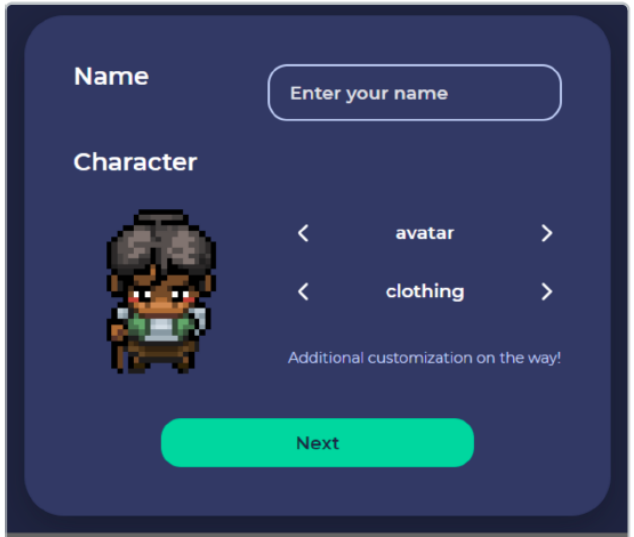
Why use Zenodo?

- **Safe** — your research is stored safely for the future in CERN's Data Centre for as long as CERN exists.
- **Trusted** — built and operated by CERN and OpenAIRE to ensure that everyone can join in Open Science.
- **Citeable** — every upload is assigned a Digital Object Identifier (DOI), to make them citable and trackable.
- **No waiting time** — Uploads are made available online as soon as you hit publish, and your DOI is registered within seconds.
- **Open or closed** — Share e.g. anonymized clinical trial data with only medical professionals via our restricted access mode.
- **Versioning** — Easily update your dataset with our versioning feature.
- **GitHub integration** — Easily preserve your GitHub repository in Zenodo.
- **Usage statistics** — All uploads display standards compliant usage statistics

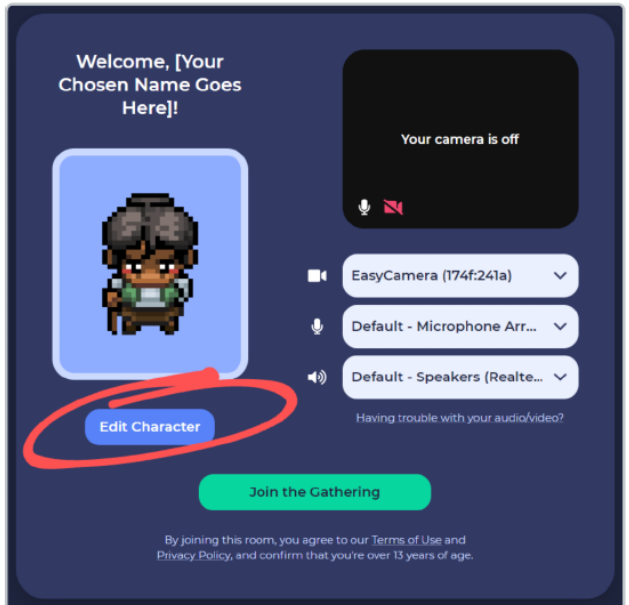
Social Networking Event: End of Today

Gather Town
Virtual Reception
(Quick Start Guide)

First Time Entering into space

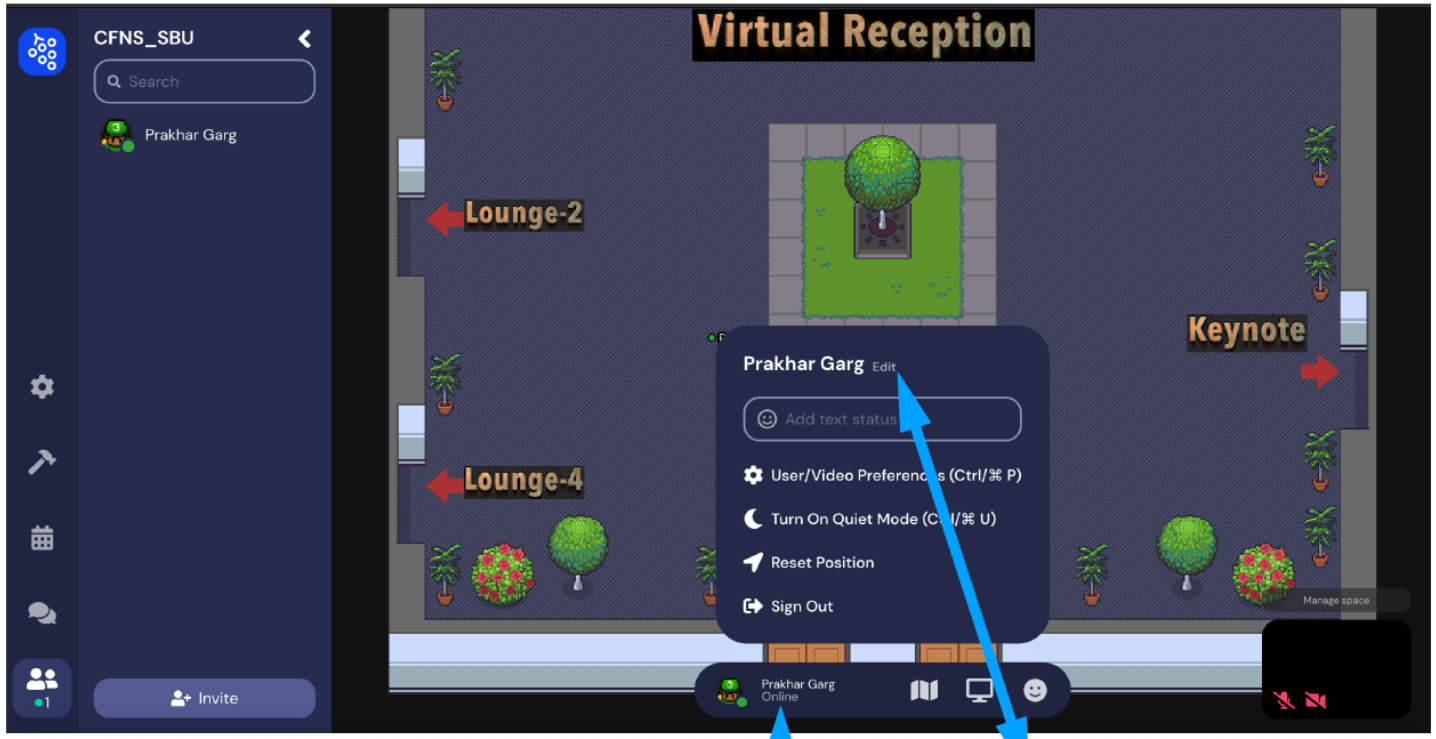


When you first use Gather, you will be asked to enter your name and choose your avatar. You will see this screen again if you need to edit your character.

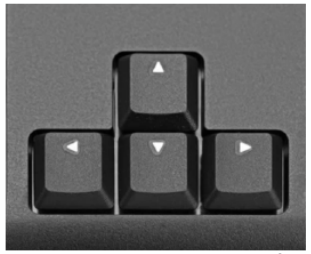


You can change the name you set for yourself for the Space by clicking "Edit Character."

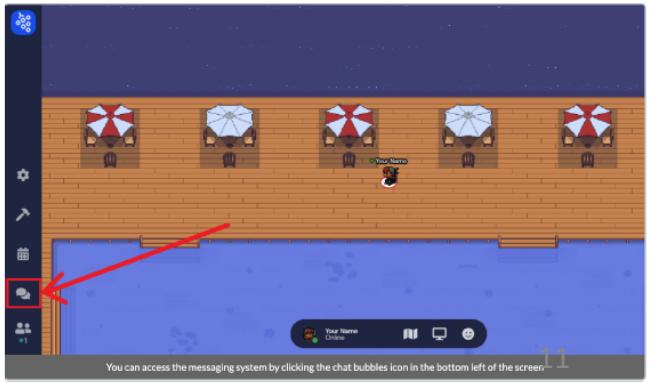
Setting Your Name After Entering into space



Navigation into space

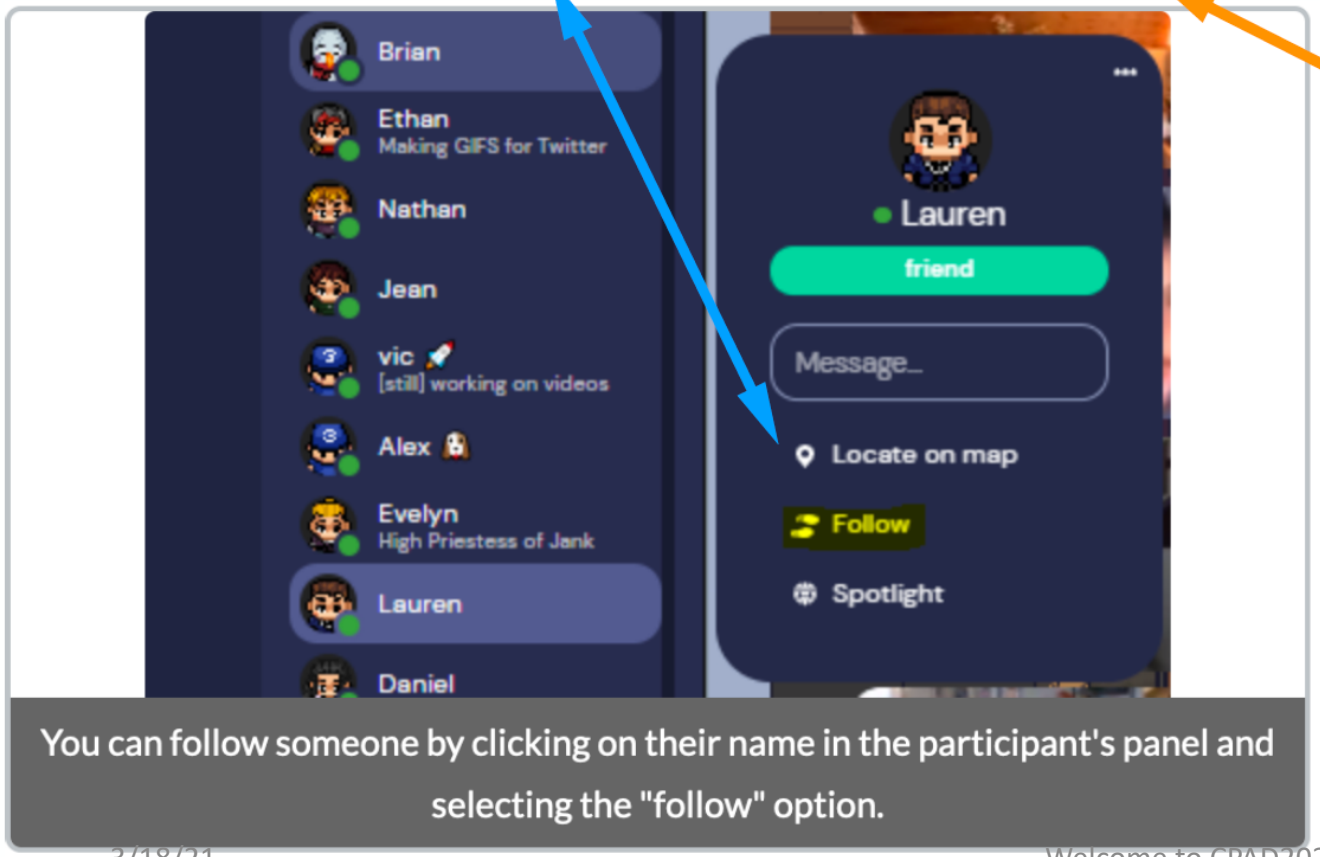


Messaging to others



How to find someone

Locate Participants ⟷ Follow the Path



Code of Conduct

From the APS code of conduct

- It is the policy of the CPAD Meeting that all participants, including attendees, vendors, staff, volunteers, and all other stakeholders will conduct themselves in a professional manner that is welcoming to all participants and free from any form of discrimination, harassment, or retaliation. Participants will treat each other with respect and consideration to create a collegial, inclusive, and professional environment at the workshop. Creating a supportive environment to enable scientific discourse is the responsibility of all participants.
- Participants will avoid any inappropriate actions or statements based on individual characteristics such as age, race, ethnicity, sexual orientation, gender identity, gender expression, marital status, nationality, political affiliation, ability status, educational background, or any other characteristic protected by law. Disruptive or harassing behavior of any kind will not be tolerated. Harassment includes but is not limited to inappropriate or intimidating behavior and language, unwelcome jokes or comments, unwanted touching or attention, offensive images, photography without permission, and stalking.
- Violations of this code of conduct policy should be reported to the organizers. Sanctions may range from verbal warning, to ejection from the meeting without refund, to notifying appropriate authorities. Retaliation for complaints of inappropriate conduct will not be tolerated. If a participant observes inappropriate comments or actions and personal intervention seems appropriate and safe, they should be considerate of all parties before intervening.